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Chief, Operations & Training Division, OC

16 May 1956

Chief, Engineering Division, OC

Transistorized Converter, CV-1

1. This memorandum summarizes the work recently completed on the transistorized converter project. The discussion includes the defects noted in the two units returned for repair, the modification which permits safer operation with AC-DC type receivers, and the characteristics of the two solar batteries recently forwarded for use with the unit. Instructions and photographs which cover the modification are attached. Precautions suggested for addition to field instructions are also included.

2. Two converter units were returned to the Laboratory for repair. One of these units had suffered slight damage during evaluation for use with AC-DC receivers. Attachment #1 discusses this difficulty. The second unit was repaired by replacing the oscillator transistor. It is noted that the Laboratory is now aware of three failures involving the oscillator transistor. This fact prompted an attempt to establish a failure trend on the oscillator circuit. The units were operated continuously for extended periods, and connections were made in varying sequence without failure. It is believed possible, however, that the cause of this failure is associated with transients occurring during connection. To minimize this possibility, precautionary measures are listed in Attachment #2 as suggested additions to field instructions.

3. The difficulty encountered in using the converter with AC-DC receivers has been removed by the minor modification described in Attachment #2. Three units were so modified by the Laboratory. The components required for field modification of the remaining nine units have been forwarded. Photographs and instructions are included in Attachment #2.

4. During the above modification an error was noted in the original converter schematic. In the oscillator circuit, the top end of the 47 K resistor and the bottom end of crystal socket S02 should show connected to the transistor base. This error has been corrected on the schematics which form a part of Attachment #2.

5. Two solar batteries capable of operating the converter have been completed. These units were forwarded on 14 May. Photographs and characteristics appear in Attachment #3.

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6. The completion of the work discussed above fulfills current laboratory commitments on the converter project.

25X1

Attachments (3)

R&D/Lab/NCP/rkb (16 May 1956)

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